

CLAIMS

1. A spatial filter comprising:
means for increasing angular spread of non-conjugated energy and
means for suppressing said angular spread non-conjugated energy.
2. The invention of Claim 1 wherein said means for increasing angular spread includes an aberrator.
3. The invention of Claim 1 wherein the aberrator is an amplifier.
4. The invention of Claim 1 wherein said means for suppressing includes an opaque plate with a pinhole aperture therethrough.
5. The invention of Claim 1 wherein said means for suppressing includes a highly angle-selective thick Bragg grating.
6. The invention of Claim 1 further including first and second lenses disposed on opposite sides of said means for suppressing.
7. A phase conjugate master oscillator/power amplifier laser architecture comprising:
a master oscillator adapted to output a laser beam;
a power amplifier beamline in optical alignment with said beam;
5 means for creating a beam having phase conjugate energy and non-conjugated energy; and
at least one spatial filter in alignment with said amplifier, said filter having means for increasing angular spread of said non-conjugate energy in said beam and means for suppressing said spread non-conjugate energy in said beam.

8. The invention of Claim 7 wherein said beamline includes plural amplifiers.

9. The invention of Claim 8 further including a spatial filter between one or more of said amplifiers.

10. A loop phase conjugate resonator comprising:
first means for providing an interference pattern;
an amplifier in alignment with said first means; and
a spatial filter in alignment with the amplifier and adapted to increase the
5 angular spread of non-conjugate energy in a beam amplified by said amplifier and
suppress said spread non-conjugate energy in said beam.

11. The invention of Claim 10 wherein said spatial filter includes an aperture.

12. The invention of Claim 10 wherein said spatial filter includes an aberrator.

13. The invention of Claim 10 wherein said spatial filter further includes first and second lenses.

14. A method for spatial filtering including the steps of:
increasing angular spread of non-conjugated energy and
suppressing said angular spread non-conjugated energy.

15. A phase conjugating method comprising the steps of:
providing a laser beam;
conjugating at least a portion of said beam;
increasing angular spread of said non-conjugate energy in said beam; and
5 suppressing said spread non-conjugate energy in said beam.